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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,029	02/27/2002	Zoran Minevski	LYNN/0083	8452
7590 03/24/2004			EXAMINER	
STREETS & STEELE 13831 Northwest Freeway, Suite 355 Houston, TX 77040			PHASGE, ARUN S	
			ART UNIT	PAPER NUMBER
			1753	
DATE MAILED: 03/24/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/084,029	Applicant(s) MINEVSKI ET AL.	
	Examiner Arun S. Phasge	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> pages. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-8, 16, 29-30, 33, 35, 37, 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by the Soviet patent abstract SU 1604863.

The Soviet abstract discloses the claimed method of forming ferrates by the anodic dissolution of iron in an alkali hydroxide solution, wherein the reference discloses the similar ranges of concentration of the hydroxide, direct current, types of anode and a batch type process (see abstract). The reference further discloses the claimed product (see abstract).

Therefore, since the abstract discloses each and every limitation, the claims are anticipated.

Claims 1-3, 6-8, 14, 16-18, 26, 29-30, 33-35, 37, 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Soviet Patent SU 1567655.

The Soviet abstract discloses the claimed method of forming ferrates by the anodic dissolution of iron in an alkali hydroxide solution, wherein the reference discloses the similar ranges of concentration of the hydroxide, temperature, direct current, current density, types of anode (i.e., metallic iron which would react on pure iron) and a batch type process (see abstract). The reference further discloses the claimed product (see abstract).

Consequently, since the abstract discloses each and every limitation, the claims are anticipated.

Claims 1-3, 6-8, 14-17, 19-22, 24, 26-35, 37, 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouzek et al.

Bouzek discloses the claimed method of forming ferrates by the anodic dissolution of iron in an alkali hydroxide solution, wherein the reference discloses the similar ranges of concentration of the hydroxide, temperature, direct current, current density, types of anode and cathode, shapes of the electrodes and a batch

type process (see pages 919-920). The reference further discloses the claimed product (see abstract).

Thus, since the abstract discloses each and every limitation, the claims are anticipated.

Claims 1-8, 16-35, 37-38, 40-42 are rejected under 35 U.S.C. 102(a) as being anticipated by Chemergy Ltd.

The Chemergy reference discloses the claimed method of forming ferrates by the anodic dissolution of iron in an alkali hydroxide solution, wherein the reference discloses the similar ranges of concentration of the hydroxide, temperature, direct current, current density, types of anode and cathode, shapes of the electrodes and a batch type process (see pages 10-19). The reference further discloses the combination of alkali and alkaline earth hydroxides (see page 12). The reference further discloses the claimed product (see abstract).

Therefore, since the patent discloses each and every limitation, the claims are anticipated.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-15, 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemergy as applied to claims above, and further in view of Bouzek applied as above.

The Chemergy patent does not disclose the combination of KOH and NaOH, temperature range or the superimposition of the sinusoidal current on the DC.

The Bouzek patent is cited to show the use of the range of temperatures to produce the electrolytic ferrate (see page 919).

Therefore, the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

disclosure of the Chemergy reference with the teachings of the Bouzek reference, because the Bouzek reference teaches the modification to temperature and the results obtained therefrom.

The Chemergy reference discloses the use of both the alkali hydroxides, i.e., KOH and NaOH. It would have been obvious to use a combination of the two references because such modification to combine two compositions known to be useful for the formation of ferrate salts to form ferrates salts would have been an obvious modification to the ordinary artisan. *In re Susi* 169 USPQ 423, 426 (CCPA 1971). Further, the modification to superimpose an sinusoidal current over the DC would have been an obvious modification, because such superimposition is routinely used in the art to provide increased current and thus an increased product.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun S. Phasge whose telephone number is (571) 272-1345. The examiner can normally be reached on MONDAY-THURSDAY, 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Arun Phasge', with a large, stylized initial 'A'.

Arun S. Phasge  
Primary Examiner  
Art Unit 1753